

parallel to one another. This is an important factor, since the blood pressure method is rather extensively used for standardization purposes, its employment being supported by statements that the characteristic effect of ergot is a stimulation of all unstriated muscle tissue of the body, and that the changes in the circulation, in the intestines and in the uterus are but a part of one general action. The employment of this method has been further supported by the fact that all of the substances which have been suggested by various writers as the active principles of ergot have produced stimulation of the blood-vessels as well as of the uterus. So far as we are able to learn, however, no experimental results have ever been published to show whether or not these two actions run parallel.

We are, therefore, now testing every sample of ergot submitted for assay by both the uterine and blood pressure method. By this means we will be able after a sufficient number of samples have been tested to compare the results obtained and thus determine whether or not a parallelism does exist between these two actions. If on completion of our experiments the results show that all the samples which assayed high by the blood pressure method also assayed high by the uterine method we will know that these actions do run parallel. If, on the other hand, some samples run high by one method and low by the other, we will know that such a parallelism does not exist.

Up to the present time we have made comparisons with seven samples with the following results:

Preparation.	Comparative strength by B. P. method.	Comparative strength by uterine method.
No. 1 F. E.....	166%	170%
No. 2 Cornutol	100%	90%
No. 3 F. E.....	153%	148%
No. 4 F. E. 5 mo. old.....	51%	100%
No. 5 F. E.....	224%	230%
No. 6 F. E.....	210%	198%
No. 7 F. E.....	118%	105%

The above table would indicate that a parallelism does exist between the action of ergot upon the circulatory system and the action upon the uterus. We will, however, be unable to arrive at a definite conclusion until more data has been compiled.

We will, therefore, continue our investigations along these lines for another year.

RESEARCH LABORATORY OF H. K. MULFORD COMPANY, July 28, 1913.

THE PROPOSED LIST OF USEFUL REMEDIES.*

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For more than a decade men who are genuinely interested in the development of pharmacy as a recognized and necessary branch of medicine, have viewed with alarm the ever-growing accumulation of disparaging evidence, on the part of national and state food, dairy and drug officials, and have urged upon the fellow-

*Read before the Scientific Section at the Nashville Meeting.

members of their craft a more active propaganda to secure for true pharmacy the recognition and respect that is properly due it for services rendered. These seers, dreamers and reformers have, however, up to the present time, railed in vain and some indeed have passed on to their final accounting without even the flicker of a promise that pharmacy,—the pharmacy which they loved so well and for which they sacrificed their all,—would ever again resume the comparative position of honor accorded it in the earlier days of medicine.

Unfortunately, too, it must be admitted that pharmacy in European countries,—to which we have in the past looked, with something akin to awe, for inspiration and support,—appears to be undergoing a degenerative commercialization, and in Germany, particularly, many of the followers of the craft have undertaken to vie with larger manufacturers in the production of proprietary remedies of little or no value. To such an extent has this commercialization of German pharmacy and pharmaceutical chemistry been developed, that members of the medical profession of that country have felt compelled to institute a Commission or Committee on New Remedies, with objects similar to those of the Council on Pharmacy and Chemistry of the American Medical Association. This Commission, though working along somewhat different lines from those laid down by the Council on Pharmacy and Chemistry in our own country, is destined to bring about a decided change in the methods of marketing proprietary remedies in Germany, and the objections already recorded in medical and pharmaceutical journals, evidence the fact that the work is opportune and that it is meeting with the approval of medical men.

It will generally be admitted that the fundamental object of pharmacy is to maintain the purity and efficiency of the medicines used for the treatment of disease. If this truism be accepted as law, then any person or any collection of persons not in accord with it, as the essential principle of pharmaceutic practice, must, of necessity, be considered as being out of harmony with the interests of true pharmacy, and unfriendly to the real object of our vocation. That there is considerable difference of opinion in regard to the maintenance of the accepted efficiency of materia medica products by the votaries of pharmacy, is evidenced by the fact that many pharmacists, or so-called pharmacists, aver that it is their duty to supply the medicaments asked for, without making any serious effort to differentiate between good and indifferent remedies or between efficient and inefficient methods of administering them. This purely servile attitude has prevailed altogether too long in American pharmacy and was branded as one of its essential shortcomings by the institution of the Council on Pharmacy and Chemistry of the American Medical Association some eight years ago.

Despite the fact that the American Pharmaceutical Association, as an association, has never taken an active interest in the work of the Council on Pharmacy and Chemistry, individual members of this Association have, from the very origin of the Council, taken a prominent part in its evolution and development. In the course of time, the work of the Council on Pharmacy and Chemistry has developed, and in place of involving, as formerly, principally questions of pharmacy or pharmaceutical chemistry, the problems under consideration to-day frequently involve questions of bacteriology, pharmacology and practical therapeutics, and the *personnel* of the Council has of course materially changed. De-

spite this fact, however, even at the present time fully one-half of the members of the Council on Pharmacy and Chemistry of the American Medical Association are also members of the American Pharmaceutical Association.

The origin and object of the Council have been discussed at length in the pages of the Journal of the American Pharmaceutical Association (v. 1, p. 39), and those of our members who are interested, will find a recent *resume* of its activities by Torald Sollmann, in the Journal of the American Medical Association, (July 15, 1903, v. 61, p. 5-7).

The main object of the Council on Pharmacy and Chemistry has well been defined as the general reformation of what is debased and debasing in the present status of drug therapy, and in the course of their work, the members have become convinced that a very fair proportion of the physicians of the country are desirous of securing authoritative information regarding the present status of all remedies, and are quite willing to accept reasonable opinions regarding the value or uselessness of official, as well as of non-official medicaments. To establish an authoritative compend of widely used drugs, the Council has endeavored to compile a list of really useful remedies. Such a list, it was thought, would be of great practical value as a factor in advancing drug therapy along scientific lines, as well as in combating the evils of nostrums of all kinds. It was also thought that such a list would be of use as a basis for instruction in materia medica subjects in medical schools, and as a reasonable limitation for examinations in materia medica subjects, by state medical examining boards.

With the very limited amount of time that can be devoted to materia medica, in the present-day curriculum of medical schools, it is evident that it would be practically impossible to teach all that is known of the five thousand or more drugs and preparations comprised in the several pharmacopœias of the world, to say nothing of giving even the most superficial survey to the countless hundreds of articles mentioned in dispensatories and other books of reference. Thorough instruction regarding the properties, uses and limitations of a reasonable number of widely used medicaments, it was argued, would serve to give to the prospective practitioner of medicine a reliable foundation in materia medica subjects, on which he would be able to develop a practical and safe materia medica for himself.

A list of useful remedies, to serve the purposes outlined above, should include all articles regarding which a prospective graduate from a medical school, or a reasonably well informed medical practitioner, might be expected to have a fair amount of information. With the constant, and at times rapid, changes in our knowledge regarding the possible action and uses of drugs, this list must, of necessity, be more or less ephemeral, and be modified, from time to time, so as to include only the articles that are being actively used and discussed in all sections of the country, if not in all parts of the world.

A tentative list of important medicaments was compiled in 1908, under the direction of the Council on Medical Education of the American Medical Association, by the Sub-committee on Pharmacology, Toxicology and Therapeutics. This list was later submitted to the National Federation of State Medical Examining and Licensing Boards, who endorsed the principle involved and appointed a special committee to compile a list adapted to the needs of state medical

examining boards. From this latter list, the Council on Pharmacy and Chemistry, through the Sub-committee on Useful Remedies, compiled a preliminary list of widely used articles, and this list was then sent to teachers of pharmacology and therapeutics in medical schools and colleges, to deans of medical schools and colleges, to the secretaries and some of the members of state medical examining boards, and to a number of medical practitioners who were thought to be interested in the subject. The replies received from these several sources were compiled, and the revised list was subsequently submitted for discussion and additional comment, through the pages of the Journal of the American Medical Association.

So far as practicable, in the present knowledge of the usefulness of medicines in therapy, an effort has been made to include in the list of useful remedies, only such drugs as are generally acknowledged to have superior medicinal value, or which, because of their supposed value, are still in general use in all parts of the United States. This principle does not, of course, exclude drugs regarding which pharmacologists have decided opinions as to their worthlessness, but it does limit the inclusion of such drugs to a reasonable number, and it may properly be expected that, in the near future, reliable clinical observations will definitely prove the value or uselessness of the limited number of drugs of this kind.

How successful the Council has been to compile a really international list of useful remedies, is evidenced by a comparative review of the present list with the articles included in the several well known pharmacopœias of the world. The total number of titles and headings in the present list can be classed as follows:

Drugs or chemicals.....	231
Preparations	173
Class definitions	43
Cross references	13

Of the 231 titles of drugs or chemicals, all but one, salvarsan, N. N. R., are included in one or more of the now existing pharmacopœias and, of the remaining number, again, all but one, phenolphthalein, are included in two or more of the now official pharmacopœias. The recognition accorded the several articles in 16 national pharmacopœias is approximately as follows:

95 are included in all 16 pharmacopœias.
80 are included in from 10 to 15 pharmacopœias.
27 are included in from 5 to 9 pharmacopœias.
25 are included in from 2 to 4 pharmacopœias.
1 is included in but one pharmacopœia.
1 is not official at the present time.

The object of bringing this matter to the attention of the members of the Scientific Section of the American Pharmaceutical Association, is to point out that much, if not all, of the dissatisfaction with established medicaments, may be due to the fact that, as they reach the patient, they are not strictly in accordance with the requirements of the Pharmacopœia.

This rather bold, bald statement may be questioned by some, but when it is remembered that, for a decade or more, incontrovertible evidence to this effect has been accumulating, and is readily available, it would appear that the

rational course for pharmacists to pursue would be to assist in correcting existing evils and to insist that all readily controlled drugs be sold or dispensed only in full compliance with established standards.

It will generally be admitted that, under present-day conditions, it is impracticable, adequately, to control, by chemical or other means, all of the many drugs and medicines dispensed on physicians' prescriptions. With the establishment of a reasonably limited list of drugs and preparations, however, it would be possible for the pharmacist to comply with the requirements of established standards and to satisfactorily control the identity and purity of the medicaments so listed. Such a limited list of substances would also facilitate systematic study of the deterioration or changes of drugs and preparations and the methods best suited for preventing them. How little we really know of the chemical behavior of even the best known drugs and preparations has again been emphasized by Neuberger and Shewket (*Biochem. Ztschr.*, p. 495-501), who, in a report of studies on changes in medicaments caused by light, call attention to the possible photochemical action of iron, and point out that solutions of otherwise indifferent materials may be decomposed by light, in the presence of salts of iron, into physiologically active substances. The possibilities suggested by this report alone, offer material for study for many years to come, and this study, if concentrated on a reasonably small number of drugs and preparations, would yield practical results of value to the medical practitioner of the future.

In conclusion, I will venture the assertion that the active coöperation of the various branches of pharmacy, in protecting a reliable materia medica, will tend to strengthen the faith and reliance of medical practitioners in really useful remedies, will assist in eliminating perfunctory drugging with useless mixtures, and will lead to a rational, scientific study of the action of drugs on the healthy and on diseased organisms, and thus serve to place drug therapy on a reasonable and secure foundation for all time to come.

DISCUSSION.

Wm. Mansfield, of New York, said that he thought the use of vegetable drugs in the last fifty years had been increasing gradually in this country, and all over the world. He was in touch with a great many people interested in these things, and was sure that there was a movement going on to bring back vegetable drugs. He believed that, while this list was helpful, it was really not a restricted list, but a prepared list, which included standards of purity, tests of identity, for every drug and preparation used in medicine. He thought the person in a small country place, who bought a few pounds of drugs, was as much entitled to receive pure drugs as the man manufacturing thousands of pounds. The interests of such men should be taken into consideration, as well as the results of the comparatively few men in the laboratory.

In response to a question by Mr. Murray, Mr. Wilbert said there was a larger book in process of publication now. He believed this was to be obtained, at the present time, from the offices of the *Journal of the American Medical Association*.

Continuing, Mr. Wilbert said that the paper would serve to record an effort to get at the things most used at the present time and to secure reasonable uniformity.